IN THE CLAIMS

- 1. (currently amended) <u>A m</u>Method of coloring porous material, which comprises contacting the material being colored, with
- a) a capped diazonium compound of formula

$$\Delta^{+}N > N$$
 An (1)

wherein

A⁺ is a cationic radical of an organic compound,

B is a radical of an unsubstituted or substituted, aliphatic or aromatic amine,

An is an anion,

and

- b) optionally a coupling component.
- 2. (currently amended) <u>A m</u>Method according to claim 1, which comprises contacting the material being colored, with
- a) a capped diazonium compound of formula (1)

wherein

A⁺ is a cationic radical of unsubstituted phenyl; naphthyl; thiophenyl; 1,3-thiazolyl;

1,2-thiazolyl; 1,3-benzothiazolyl; 2,3-benzothiazolyl; imidazolyl; 1,3,4-thiadiazolyl;

1,3,5-thiadiazolyl; 1,3,4-triazolyl; pyrazolyl; benzimidazolyl; benzopyrazolyl; pyridinyl; quinolinyl; pyrimidinyl; isoxazolyl; aminodiphenyl; aminodiphenylether and azobenzenyl or

A⁺ is cationic radical of a phenyl, naphthyl, thiophenyl, 1,3-thiazolyl, 1,2-thiazolyl,

1,3-benzothiazolyl, 2,3-benzothiazolyl, imidazolyl, 1,3,4-thiadiazolyl, 1,3,5-thiadiazolyl,

1,3,4-triazolyl, pyrazolyl, benzimidazolyl, benzopyrazolyl, pyridinyl, quinolinyl, pyrimidinyl and isoxazolyl, aminodiphenyl, aminodiphenylether and azobenzenyl, each of which is mono- or polysubstituted by C_1 - C_4 alkyl, C_1 - C_4 alkoxy, C_1 - C_4 alkylthio, quaternised ammonium radicals, halogen, e.g. fluorine, bromine or chlorine, nitro, trifluoromethyl, CN, SCN, C_1 - C_4 alkylsulfonyl, phenylsulfonyl, benzylsulfonyl, di- C_1 - C_4 alkylaminosulfonyl, C_1 - C_4 alkyl-carbonylamino,

C₁-C₄alkoxysulfonyl or by di-(hydroxy-C₁-C₄alkyl)-aminosulfonyl, or

A⁺ is a cationic radical of an organic dye, and

B is a radical of formula –NR₆₅R₆₆, wherein R₆₅ is hydogen; or unsubstituted linear or branched C₁-C₆alkyl or linear or branched C₁-C₆alkyl, which is substituted by one or more identical or different substituent selected from the group consisting of OC₁-C₄alkyl, COOH, COO⁻, COOC₁-C₂alkyl, SO₃H,

SO₃, NH₂, CN, halogen and OH, O; and R₆₆ is unsubstituted linear or branched C₁-C₆alkyl or linear or branched C₁-C₆alkyl, which is substituted by one or more identical or different substituent selected from the group consisting of OC₁-C₄alkyl, COOH, COO, COOC₁-C₂alkyl, SO₃H, SO₃, NH₂, CN, halogen and OH, O; or

B is a radical of unsubstituted aniline; or a radical of unsubstituted aminonaphthalene; the radical of aniline or aminonaphthalene, wherein the phenyl or the naphthyl ring is substituted by one or more identical or different substituent selected from the group consisting of COOH, COO⁻, SO₃H, SO₃⁻, CN, halogen, SO₂C₁-C₂alkyl, unsubstituted linear or branched C₁-C₄alkyl, linear or branched C₁-C₄alkyl, substituted by OH, O⁻, COOH, COO⁻, COC₁-C₂alkyl or

SO₂-N(C₁-C₄alkyl)-(CH₂)₁₋₄SO₃H and wherein the amino radical is substituted by hydrogen, unsubstituted linear or branched C₁-C₄alkyl or linear or branched C₁-C₄alkyl, substituted by OH, O⁻, or COOH, COO⁻;

An is an anion,

and

b) a coupling component.

- 3. (currently amended) A mMethod according to claim 2 any of the precedings claims, wherein A⁺ is a cationic radical of unsubstituted phenyl; naphthyl; thiophenyl; 1,3-thiazolyl; 1,2-thiazolyl; 1,3-benzothiazolyl;
- 2,3-benzothiazolyl; imidazolyl; 1,3,4-thiadiazolyl; 1,3,5-thiadiazolyl; 1,3,4-triazolyl; pyrazolyl; benzimidazolyl; benzopyrazolyl; pyridinyl; quinolinyl; pyrimidinyl; isoxazolyl; aminodiphenyl; aminodiphenylether and azobenzenyl or
- A⁺ is cationic radical of a phenyl, naphthyl, thiophenyl, 1,3-thiazolyl, 1,2-thiazolyl,
- 1,3-benzothiazolyl, 2,3-benzothiazolyl, imidazolyl, 1,3,4-thiadiazolyl, 1,3,5-thiadiazolyl,
- 1,3,4-triazolyl, pyrazolyl, benzimidazolyl, benzopyrazolyl, pyridinyl, quinolinyl, pyrimidinyl and isoxazolyl, aminodiphenyl, aminodiphenylether and azobenzenyl, each of which is mono- or polysubstituted by C_1 - C_4 alkyl, C_1 - C_4 alkoxy, C_1 - C_4 alkylthio, halogen, e.g. fluorine, bromine or chlorine, nitro, trifluoromethyl, CN, SCN, C_1 - C_4 alkylsulfonyl, phenylsulfonyl, benzylsulfonyl, di- C_1 - C_4 alkylaminosulfonyl, C_1 - C_4 alkyl-carbonylamino, C_1 - C_4 alkoxysulfonyl or by di-(hydroxy- C_1 - C_4 alkyl)-aminosulfonyl, or

A⁺ is a cationic radical residue of an organic dye selected from anthraquinon dye, acridine dye, azo dye, azomethin dye, hydrazomethin, benzodifuranone dye, coumarin dye, diketopyrrolopyrrol dye, dioxaxine dye, diphenylmethane dye, formazan dye, indigoid dye, indophenol, naphtalimide dye, naphthoguinone dye, nitroaryl dye, merocyanine dye, methin dye, oxazine dye, perinone dye, perylene

dye, pyrenequinone dye, phthalocyanine dye, phenazine dye, quinonimine dye, quinacridone dye, quinophtalone dye, styryl dye, triphenylmethan dye, xanthene dye, thiazine dye and thioxanthene dye, and

B is a radical of formula –NR $_{65}$ R $_{66}$, wherein R $_{65}$ is hydrogen; or unsubstituted linear or branched C $_1$ -C $_6$ alkyl or linear or branched C $_1$ -C $_6$ alkyl, which is substituted by one or more identical or different substituent selected from the group consisting of OC $_1$ -C $_4$ alkyl, COOH, COO $_7$, COOC $_1$ -C $_2$ alkyl, SO $_3$ H, SO $_3$, NH $_2$, CN, halogen and OH, O and R $_{66}$ is unsubstituted linear or branched C $_1$ -C $_6$ alkyl or linear or branched C $_1$ -C $_6$ alkyl, which is substituted by one or more identical or different substituent selected from the group consisting of OC $_1$ -C $_4$ alkyl, COOH, COO $_7$, COOC $_1$ -C $_2$ alkyl, SO $_3$ H, SO $_3$, NH $_2$, CN, halogen, OH and O $_7$.

- 4. (currently amended) A mMethod according to claim 3 any of the precedings claims, wherein A is a cationic radical of an organic dye selected from azo dye, azomethin dye, hydrazomethin dye, merocyanine dye, methin dye and styryl dye.
- 5. (currently amended) A method according to <u>claim 1</u> any of the precedings claims, wherein there is used as a coupling component an unsubstituted or substituted acylacetarylamide, phenol, naphthol, pyridine, quinolone, pyrazole, indole, diphenylamine, aniline, aminopyridine, pyrimidone, naphthylamine, aminothiazole, thiophene or hydroxypyridine.
- 6. (currently amended) A method according to <u>claim5any of the precedings claims</u>, wherein a coupling component is used, which is mono- or poly-substituted by amino, alkylamino, dialkylamino, halogen, alkyl, alkoxy, phenyl, naphthyl or aryloxy.
- 7. (currently amended) A mMethod according to claim 2 any of the precedings claims, wherein A is a cationic radical of a dye of formulae (7) and (8)

$$D^{+} \frac{(d1)}{} Z_{5} \frac{(d1)}{} M \frac{(q1)}{}$$
 (7)

$$T - \frac{(d1)}{Z_5} Z_5 - \frac{(d1)}{Q^+ - Q^+} Q_5$$
 (8)

wherein

Z₅ is a biradical selected from:

-N=N-, -CR₆=N-, -N=CR₇-, -NR₈-N=CR₉-, -R₁₀C=N-NR₁₁-, -CR₆= CR₆-,

wherein

 R_6 , R_7 , R_8 , R_9 , R_{10} and R_{11} are each independently of the other hydrogen, or unsubstituted or substituted C_1 - C_{14} alkyl, allyl, - C_5 - C_{10} aryl, - C_1 - C_{10} alkylen(C_5 - C_{10} aryl),

-C5-C10arylen-(C1-C10alkyl), and

D⁺ is a radical of a cationic, aromatic, substituted or unsubstituted heterocyclic compound,

M is a biradical of an aromatic substituted or unsubstituted compound,

T is a radical of an aromatic substituted or unsubstituted compound, and

Q⁺ is a biradical of an aromatic, substituted or unsubstituted heterocyclic compound.

8. (currently amended) A mHethod according to claim 7, wherein D⁺ is a radical of a cationic aromatic substituted or unsubstituted heterocyclic compound of formulae (9), (10), (10"), (10"), (11), (12) or (13)

$$R_{17}$$
 $+ N$
 R_{18}
 R_{19}
 R_{21}
 R_{19}
 R_{21}
 R_{19}
 R_{21}
 R_{19}
 R_{21}
 R_{19}
 R_{21}
 R_{21}
 R_{20}
 R_{21}
 R_{20}
 R_{21}
 R_{21}
 R_{22}
 R_{21}
 R_{22}
 R_{22}
 R_{23}

$$\begin{array}{c|ccccc}
(d1) & Z_{13} & R_{23} \\
\hline
R_{24} & X_{14} & An
\end{array}$$
(13)

wherein

(d1) is a bond of formula (7) as defined in claim 7; and

Q⁺ is a biradical of a cationic aromatic substituted or unsubstituted heterocyclic compound of formulae (14), (14'), (15), (15'), (15"), (16), (17) or (18)

$$(q1) \qquad (q1) \qquad (q1) \qquad R_{14} \qquad R_{15} \qquad (d1) \qquad (d$$

$$\begin{array}{c|c}
R_{22} & R_{23} \\
\hline
 & (d1) & Z_{13} \\
\hline
 & (q1) & Z_{14} \\
\hline
 & An
\end{array}$$
(18)

wherein

(d1) and (q1) are a bond to Z_5 of formula (8)-as defined in claim 7, and

M is a biradical of formulae (19) or (20),

wherein

(d1) and (q1) are a bond of formula (7)-as defined in claim 7, and

T is a radical of compounds of formulae (21) or (22),

wherein

(d1) is a bond of formula (8) as defined in claim 7, and wherein

 $X_{1,}$ $X_{2,}$ $X_{3,}$ $X_{4,}$ $X_{5,}$ $X_{6,}$ $X_{7,}$ $X_{8,}$ $X_{9,}$ $X_{10,}$ $X_{11,}$ $X_{12,}$ $X_{13,}$ $X_{14,}$ X_{15} and X_{16} are independently from each other N or a radical of CR₄₉,

 Z_6 is O or S or a radical of NR₅₀,

 Z_7 , Z_8 , Z_9 , Z_{10} , Z_{11} , Z_{12} , Z_{13} and Z_{14} are independently from each other N or a radical of CR₅₁; E, E₁, G and G₁ are independently from each other -O-, -S-, -(SO₂)-, -C₁-C₁₀alkylen or -(NR₅₂)-;

R₁₃, R₁₄, R₁₅, R₁₈, R₁₉, R₂₁, R₂₂, R₂₃, R₂₅, R₂₆, R₂₇, R₂₈, R₂₉, R₃₀, R₃₁, R₃₂, R₃₃, R₃₄, R₃₅, R₃₆, R₃₇, R₃₈, R₃₉, R₄₀, R₄₁, R₄₂, R₄₃, R₄₄, R₄₅, R₄₆, R₄₇, R₄₈, R₄₉ and R₅₁ are independently from each other hydrogen, halogen, C₁-C₁₄alkyl, which is saturated or unsaturated, linear or branched, substituted or unsubstituted, or interrupted or uninterrupted with heteroatoms; a radical of phenyl, which substituted or unsubstituted; a radical of carboxylic acid; a radical of hydroxy, nitril, C₁-C₁₆alkoxy, (poly)-hydroxy-C₂-C₄-alkoxy, carboxylic acid, sulfonic acid; halogen, sulfonylamino, SR₆₀, NHR₅₃ or NR₅₄R₅₅, OR₆₁, SO₂, COOR₆₂, NR₅₆COR₅₈, CONR₅₇; and

 R_{12} , R_{16} , R_{17} , R_{20} , R_{24} , R_{50} , R_{52} , R_{53} , R_{54} , R_{55} , R_{56} , R_{57} , R_{58} , R_{60} , R_{61} and R_{62} are each independently of the other hydrogen, unsubstituted or substituted C_1 - C_{14} alkyl, allyl,

-C₅-C₁₀arylen-(C₁-C₁₀alkyl), -C₁-C₁₀alkylen(C₅-C₁₀aryl), C₅-C₁₀aryl, and An is an anion.

9. (currently amended) A method according to claim 7 any of precedings claims, wherein D⁺ is a radical of a cationic aromatic substituted or unsubstituted heterocyclic compound of formulae (23), (24), (24a), (25), (26a) or (27)

$$R_{12}$$
 R_{12}
 R_{13}
 R_{14}
 R_{15}
 R

wherein

(d1) and (q1) are a bond of formula (7) as defined in claim 7, and

An, R₁₂, R₁₆, R₁₇ and R₁₈ have the same meaning as given in claim 8 R₁₈, is independently from each other hydrogen, halogen, C₁-C₁₄alkyl, which is saturated or unsaturated, linear or branched, substituted or unsubstituted, or interrupted or uninterrupted with heteroatoms; a radical of phenyl, which substituted or unsubstituted; a radical of carboxylic acid; a radical of hydroxy, nitril, C₁-C₁₆alkoxy, (poly)-hydroxy-C₂-C₄-alkoxy, carboxylic acid, sulfonic acid; halogen, sulfonylamino, SR₆₀, NHR₅₃ or NR₅₄R₅₅, OR₆₁, SO₂, COOR₆₂, NR₅₆COR₅₈, CONR₅₇; and

 R_{12} , R_{16} , R_{17} , R_{53} , R_{54} , R_{55} , R_{56} , R_{57} , R_{58} , R_{60} , R_{61} and R_{62} are each independently of the other hydrogen, unsubstituted or substituted C_1 - C_{14} alkyl, allyl,

- C_5 - C_{10} arylen-(C_1 - C_{10} alkyl), - C_1 - C_{10} alkylen(C_5 - C_{10} aryl), C_5 - C_{10} aryl, and An is an anion,

and

Q⁺ is a biradical of a cationic aromatic substituted or unsubstituted heterocyclic compound of formulae (28), (28a), (29), (29a), (30), (31), (31a) or (32)

$$(q1) + N - (q1) + (q1) + N - (q1) + (q1) +$$

wherein

(d1) and (q1) are bond of formula (8) as defined in claim 7, and An, R₁₂ and R₁₈ have the same meaning as given in claim 8, and

M is a biradical of formulae (33), (33a) or (33b),

$$R_{25}$$
 $(d1)$
 (33)
 R_{26}
 $(d1)$
 $(d1)$
 $(d1)$
 $(d1)$
 $(d1)$
 $(d2)$
 $(d3)$
 $(d3)$
 $(d3)$

wherein

(d1) and (q1) are bond of formula (7)-as-defined in claim 7, and

E, R₂₅ and R₂₅ have the same meaning as given in claim 8;

E is $-O_{-}$, $-S_{-}$, $-(SO_{2})_{-}$, $-C_{1}_{-}$ C₁₀alkylen or $-(NR_{52})_{-}$;

R₂₅, R₂₆, R₃₇ and R₃₈ are independently from each other hydrogen, halogen, C₁-C₁₄alkyl, which is saturated or unsaturated, linear or branched, substituted or unsubstituted, or interrupted or uninterrupted with heteroatoms; a radical of phenyl, which substituted or unsubstituted; a radical of carboxylic acid; a radical of hydroxy, nitril, C₁-C₁₆alkoxy, (poly)-hydroxy-C₂-C₄-alkoxy, carboxylic acid, sulfonic acid; halogen, sulfonylamino, SR₆₀, NHR₅₃ or NR₅₄R₅₅, OR₆₁, SO₂, COOR₆₂, NR₅₆COR₅₈, CONR₅₇; and

 R_{52} , R_{53} , R_{54} , R_{55} , R_{56} , R_{57} , R_{58} , R_{60} , R_{61} and R_{62} are each independently of the other hydrogen, unsubstituted or substituted C_1 - C_{14} alkyl, allyl,

 $-C_{5}-C_{10} \text{arylen-} (C_{1}-C_{10} \text{alkyl}), -C_{1}-C_{10} \text{alkylen} (C_{5}-C_{10} \text{aryl}), C_{5}-C_{10} \text{aryl},$ and

T is a radical of formulae (34) or (34a),

$$R_{37}$$
 R_{38} R_{37} R_{37} R_{38} R_{37} R_{37} R_{38} R_{37} R_{38} R_{37} R_{38} R_{37} R_{38} R_{37} R_{38} R_{37} R_{38} R_{39} R

wherein

 $_{\rm R_{37}}$, $_{\rm R_{38}}$ and E has the same defintion as given in claim 8, and (d1) is a bond of compound of formula (8) as defined in claim 7.

- 10. (currently amended) <u>A m</u>Method according to <u>claim 1</u> any of the precedings claims, which comprises contacting the material being colored, with
- a) at least a single capped diazonium compound selected from the group of compounds of the following formulae

$$\begin{array}{c|c}
R_{68} & R_{70} \\
R_{69} & R_{67}
\end{array}$$

$$\begin{array}{c|c}
R_{70} \\
R_{69} & R_{67}
\end{array}$$

$$\begin{array}{c|c}
R_{70} \\
R_{69} & R_{67}
\end{array}$$

$$\begin{array}{c|c}
R_{70} \\
R_{69} & R_{67}
\end{array}$$
(An)

$$R_{71} = C = C + R_{72} = R_{72} = R_{71} = R_$$

$$\begin{array}{c|c} & & & \\ & & & \\ N=N & & \\ & & \\ R_{78} & & \\ \end{array}$$

wherein

E is $-O_{-}$, $-S_{-}$, $-(SO_{2})_{-}$, CR_{80} or a radical of $-(NR_{81})_{-}$;

 R_{70} , R_{72} , R_{75} , R_{77} , R_{78} , R_{79} , R_{80} and R_{81} are independently from each other hydrogen,

C₁-C₁₆alkyl, which is saturated or unsaturated, linear or branched, substituted or unsubstituted, or interrupted or uninterrupted with heteroatoms, such as, by hydroxy, nitril, amino, C₁-C₂ alkoxy, (poly)-

and

hydroxy-C₂-C₄-alkoxy, di-C₁-C₂ alkylamino, carboxylic acid, sulfonic acid; a radical of phenyl, which substituted or unsubstituted; a radical of carboxylic acid; a radical of sulfonylamino, S, NH or N(C₁-C₄alkyl), O, halogen, SO₂, COO, OCO, NHCO, CONH, CON(C₁-C₄alkyl) or N(C₁-C₄alkyl)CO; or are independently from each other an aliphatic or aromatic, substituted;

 R_{68} with R_{69} have the same meaning as R_{70} , R_{72} , R_{75} , R_{77} , R_{78} , R_{79} , R_{80} and R_{81} as given above, or R_{68} with R_{69} can build up an aromatic carbon cycle;

 R_{67} , R_{71} , R_{73} , R_{74} , R_{76} and R_{78} are unsubstituted or substituted C_1 - C_{14} alkyl, allyl, - C_5 - C_{10} arylen-(C_1 - C_{10} alkyl), - C_1 - C_{10} alkylen(C_5 - C_{10} aryl), C_5 - C_{10} aryl;

B, An and n have the same meaning as <u>defined abovegiven in claim 2</u>; and

b) a coupling component.

11. (original) Compounds of formula (1)

$$\mathbf{A}^{+} \stackrel{\mathsf{N}_{\geq}}{\mathsf{N}} \stackrel{\mathsf{B}}{\mathsf{A}} \mathsf{n} \tag{1}$$

wherein

A⁺ is a cationic radical of an organic compound,

B is a radical of an unsubstituted or substituted, aliphatic or aromatic amine,

An is an anion, with the proviso that A⁺ is not a radical of formula

$$\begin{array}{c|c} CH_3 \\ N \\ N \\ CH_3 \\ Or \end{array}$$
 or
$$\begin{array}{c|c} CH_3 \\ N \\ CH_3 \\ \end{array}$$

- 12. (original) A composition comprising at least a single capped diazonium compound of formula (1) as defined above in claim 1 and a coupling component.
- 13. (currently amended) A composition according to claim 12 comprising in addition at least a single direct dye, and/or at least a single oxidative dye and/or an oxidative agent or a combination thereof.

- 14. (currently amended) <u>A c</u>Composition according to any one of claims 12 or 13 in form of a shampoo, conditioner, gel or emulsion.
- 15. (currently amended) A method according to any one of claim[[s]] 1-to 10-for dyeing or tinting human hair.